

AF/3682  
Zhu

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : NAHRWOLD, Thomas  
Appl. No. : 09/888,478  
Filed : June 26, 2001  
Title : LUBICANT COOLING SYSTEM FOR A MOTOR VEHICLE AXLE  
Group A. U. : 3682  
Examiner : KIM, C.  
Docket No. : 08200.461

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**APPELLANT'S REPLY BRIEF**

January 18, 2004

Hon. Director of Patents  
and Trademarks  
Washington, D.C. 20231

Dear Sir:

In response to the Examiner's Answer mailed November 15, 2004, Appellant respectfully requests the Board of Patent Appeals and Interferences consider the following arguments and reverse the decision of the Examiner in whole.

REMARKS

Applicant acknowledges that the claims must be given their broadest reasonable interpretation during prosecution, but that broad interpretation must be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999). Indeed, Appellant has provided a clear definition for the terms “axle tube” and “trunnion” in the specification, therefore, these terms cannot be interpreted by the examiner in a way that is inconsistent with the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). Therefore, the rejection of claims 1, 4, 5, 9-12, 14, 19 and 20 under 35 USC §102(b) is improper.

The Examiner has defined the structure of Baedke ‘106 that is directly contrary to the actual words of Baedke ‘106; that is directly contrary to express purpose and intent of Baedke ‘106; and that is directly contrary to the disclosure of the instant application. The Examiner’s entire argument is based on definitions that the Examiner has ascribed to the terms “axle tube” and “trunnion”. The Examiner’s definition is not only contrary to Appellant’s use of these terms in the specification and claims, but it is also contrary to the prior art document of Baedke ‘106 forming the basis of the §102 rejection.

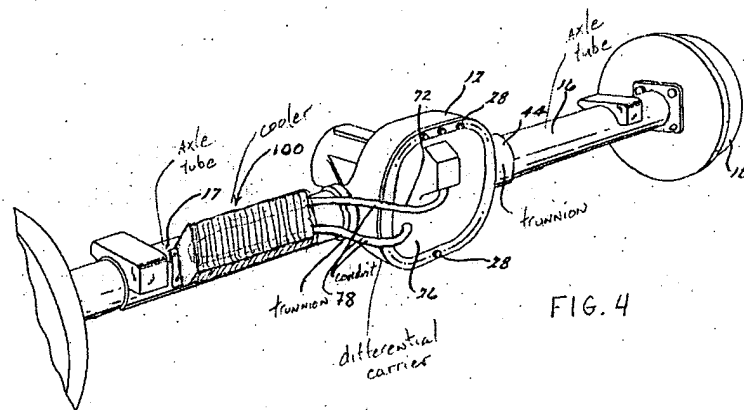
Baedke ‘106 specifically refers to “axle tubes 16, 17” at column 3, lines 59, 63-64 and column 4, lines 4-5. Baedke never refers to the trunnions 44, 46 as axle tubes. Indeed, no prior art exists that refers to the extensions or trunnions 44, 46 as “axle tubes”.

More importantly, Baedke '106 specifically states that the purpose of the Baedke '106 invention is to avoid the use of an additional heat exchanger such as the device described in the current claims; to wit, Baedke '106 states

"[l]ubricant is carried to portions of the axle assembly that are exposed to a high velocity airstream so that heat in the lubricant is transferred to the airstream without the need to provide additional heat transfer surfaces such as fins." Baedke '106, col. 4, lines 21-25, emphasis added.

Thus, the express purpose of Baedke '106 is to provide a cooling circuit through existing axle structure; i.e., the existing axle tube, without the need for an additional cooler.

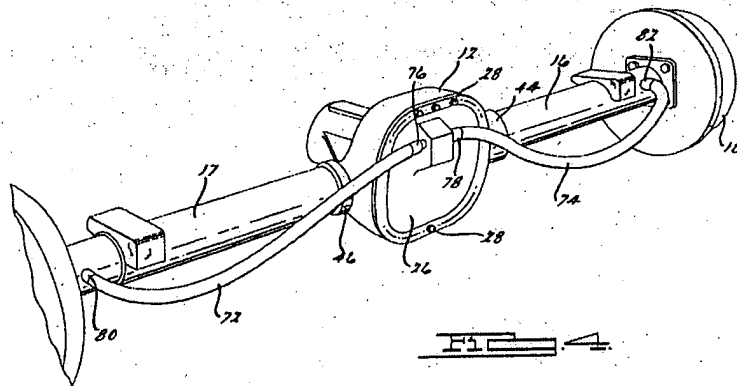
Figure 4 of the present application is shown below with textual labels added by Appellant to reference the major components of the claimed invention. With the presently claimed invention, cooling fluid passes from the carrier through the conduit 72 into the cooler 100 and back to the carrier via the return conduit 78. The cooler is mounted external to the axle tube 17.



The cooler 100 is specifically designed as an additional finned component that Baedke '106 is trying to avoid. Baedke '106 specifically states that one advantage of the invention is that the Baedke '106 system "requires no additional pumping source nor heat exchanger." See col. 2, lines 30-37, and "without the need to provide additional heat transfer surfaces such as fins." Baedke '106, col. 4, lines 21-25, emphasis added. Therefore, the Examiner has taken a position that is directly contrary to the express definition of "axle tube" provided by Baedke '106 and a position that perverts the disclosure of Baedke '106 to improperly reject, as anticipated, a system expressly rejected by Baedke '106.

Baedke '106 fails to disclose any type of cooler "mounted external the first axle tube" (see last line of claim 1) or any type of cooler "mounted on an adjacent axle tube" (see line 6 of claim 11).

The Examiner has improperly defined the tubular extensions or trunnions 44, 46 of Baedke '106 to be "axle tubes". The extensions 44, 46 are integrally formed as part of the carrier assembly 12. Applicant respectfully submits that the Examiner is asserting a definition of axle tube that is contrary to the notoriously well known definition used by those of skill in the art. Figure 4 of Baedke '106 is reprinted below.



In Baedke '106, the tubular extensions (trunnions) 44, 46 receive therein the ends of axle tubes 16 and 17 as shown above and described in Baedke '106. The construction of Baedke '106 is notoriously well known in the art.

It is improper to interpret the trunnions 44, 46 to be axle tubes. Axle tubes 16, 17 are specifically disclosed by Baedke '106, and it is improper for the Examiner to ignore this fact. Under the Examiner's interpretation, the side gears 56, 58 would also qualify as "axle tubes" because they are tubular in shape, but such an absurd interpretation would not be proper based on notoriously well established terminology in the automotive art.


Pending claims 1 specifically recites a cooler that is disposed external to the at least one of the axle tubes, and pending claim 11 recites an arrangement where the cooler is mounted on an adjacent axle tube. Any doubt about the terminology of the pending claim is unquestionably resolved by the specification and arguments presented in this file history, and such intrinsic evidence should clearly be used to interpret the meaning of the pending claims. *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998) ("To determine the proper meaning of claims we first consider the so-called intrinsic evidence, i.e., the claims, the written description, and ... the prosecution history.")

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In re NAHRWOLD, T.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and notice to that effect is earnestly solicited. Appellant is concurrently filing a request for an oral hearing on the merits.

Respectfully submitted:  
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